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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,332	08/04/2003	Hong Huang	3409-135	6772

7590 04/30/2004
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PALO ALTO, CA 94306-2121

EXAMINER

LEVI, DAMEON E

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,332

Applicant(s)

HUANG ET AL.

Examiner

Felix O. Figueroa

Art Unit

2833

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/10/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law et al. (US 5,588,848) in view of Moran (US 6,149,443).

Law discloses a surface mount connector for mounting between two printed circuit boards, the connector comprising: a member (10) having a hollow cross-section, where two sides of said member are substantially parallel and form a first portion (12) and a second portion (not labeled). However, Law does not disclose the relative size of the contact areas. Moran teaches a connector (30) comprising a member having a hollow cross-section, where two sides (32,34) of said member are substantially parallel and form a first portion (34) and a second portion (32) that is smaller than the first portion, thus providing a larger and more stable base for the connector. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Law having the first portion (12) being larger than the second portion, as taught by Moran, to provide a larger and more stable base for the connector.

Regarding claim 2, it is noted that the combination of Law and Moran will result in the connector of Law having a trapezoidal cross-section.

Regarding claims 5 and 11, Law, as modified by Moran, discloses substantially the same invention except for the tabs. It would have been obvious to one of ordinary skill in the art to design/form the connector including tabs, since applicant has not disclosed that such structure solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without the tabs. Absent any convincing showing of the criticality of the design, this particular design is nothing more than the inventor's choice without thereby departing from the scope of the invention. *In re Dailey*, 149 USPQ 47 (CCPA 1976).

Regarding claims 6, 7, 12 and 13, Law discloses the use of copper.

Regarding claim 15, it is noted that to the extent that Law, as modified, does not specify exact dimensions, at the time of the invention, workable dimensions of the would have been a matter of routine experimentation. *In re Antonie*, 559 F.2d 618 (CCPA 1977). Where general conditions of the claim are disclosed in the prior art, it is not inventive to discover optimal or workable ranges by routine experimentation.

Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law et al. and Moran, and further in view of Pereira et al. (US 6,039,616).

Law, as modified, discloses substantially the claimed invention except for the layer of solder. Pereira teaches the use of a layer of solder (30) disposed in a connector (10) to accelerate the soldering/connection process. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Law with a layer of solder, as taught by Pereira, to accelerate the soldering/connection process.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ffr



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